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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/052,732      | 01/18/2002  | Richard L. Barrett   | M-12044 Us          | 3217             |

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EXAMINER

VERSTEEG, STEVEN H

ART UNIT

PAPER NUMBER

1753

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/052,732

Examiner

Steven H VerSteeg

Applicant(s)

BARRETT, RICHARD L

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-9,12-19 and 22-59 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 2,10,11,20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 18 January 2002 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6&7
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1 Figures 2A-2D should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2 The drawings are objected to because Figure 10 is unclear because that are two separate figures, but they are not separately labeled. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3 The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **130** [0003]; **110C** [0009]; **211** [0040]; **201** [0041]; **340** [0045]; **348** [0048]; **124** [0064]; **346** [0066]; and **600** [0071], [0072]. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4 The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description, **OD**, **ID** (Figure 2A), **272** (Figure 3), **42**, **242**, **5A-5D**, **264** (Figure 4), **338**, **312** (Figure 6); and 7, **345**, **350**, **312**, **17a-17B** (Figure 7). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office

Art Unit 1753

action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

5 Applicant is reminded of the proper language and format for an abstract of the disclosure

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6 The abstract of the disclosure is objected to because "is disclosed" needs inserted after "isolation" in line 3. Correction is required. See MPEP § 608.01(b).

7 The disclosure is objected to because of the following informalities: it is unclear if "curtain" should be "certain" at [0001], line 3; "to" needs inserted after "order" at [0002], line 10.

Appropriate correction is required.

### *Claim Objections*

8 Claims 2, 10, 11, 20, and 21 are objected to because of the following informalities: the period needs deleted in claim 2, line 6; "component" should be "gear" in claim 10, line 3; and "of claim", second occurrence, needs deleted in claim 20, line 1. Claim 11 depends from claim 10 and contains all of the limitations of claim 10. Therefore, claim 11 is objected to for the same reasons as claim 10. Claim 21 depends from claim 20 and contains all of the limitations of claim

20 Therefore, claim 21 is objected to for the same reasons as claim 20. Appropriate correction is required.

*Allowable Subject Matter*

9 Claims 1, 3-9, 12-19, and 22-59 are allowed.

10 The following is a statement of reasons for the indication of allowable subject matter: it is neither anticipated nor obvious over the prior art of record to have a cylindrical magnetron as claimed by Applicant in claim 1 or a magnetron including a rotating target tube as claimed by Applicant in claim 53 comprising a drive assembly that accommodates imperfect rotation of the target tube. None of the prior art references of record suggest imperfect rotation of the target tube.

11 It is also neither anticipated nor obvious over the prior art of record to have a sputtering device having a rotating target tube as claimed by Applicant in claim 12 wherein the secondary housing has a system of interlocking male and female components rotating about an axis. WO 00/00766 discloses two tubular sections that are joined, but as can be seen from Figure 1, the sections are not male and female sections in a secondary housing that rotate

12 It is also neither anticipated nor obvious over the prior art of record to have a device for plasma coating a substrate having a target tube that rotates as claimed by Applicant in claim 15 comprising a driveline that is able to pivot about the axis of rotation. US 5,100,527 to Stevenson et al. (Stevenson) has a rotatable magnetron, but there is no disclosure of the driveline being able to pivot about the axis of rotation.

13 It is also neither anticipated nor obvious over the prior art of record to have a device for plasma coating a substrate having a target tube that rotates as claimed by Applicant in claim 26

Art Unit 1753

comprising a brush block that is in contact with the shaft and water flowing through the shaft

US 5,298,137 to Marshall, III (Marshall) discloses wafer flowing through the shaft, but there is no indication of a brush block to transfer power to the shaft.

14 It is also neither anticipated nor obvious over the prior art of record to have a magnetron having a first and second end block and a rotating target tube as claimed by Applicant in claim 42 comprising a driveline in a first inner housing that is in a first outer housing that is electrically isolated from the first inner housing. US 5,518,592 to Bower et al. (Bower) discloses a driveline connected to a target by way of a connector, but there is no indication of the housing that the driveline is in being electrically isolated from the outer housing.

15 It is also neither anticipated nor obvious over the prior art of record to have an end block of a cylindrical magnetron as claimed by Applicant in claim 50 comprising a shield electrically isolated from an isolation plate that has a groove such that stray material cannot completely fill the groove. US 5,527,439 to Sieck et al. (Sieck) discloses grooves in the shield, and US 5,725,746 to Dickey et al. (Dickey) disclose a groove without a shield. It would not be obvious to combine the references to achieve Applicant's claimed invention.

16 It is also neither anticipated nor obvious over the prior art of record to have a magnetron having an end block as claimed by Applicant in claim 59 comprising a water cooled electrical transfer system with an inner housing that is in an outer housing and a shield around the outer housing wherein the inner housing is electrically isolated from the outer housing and the outer housing is electrically isolated from the shield. Marshall does not indicate the using an outer, inner, and shield housing that are electrically isolated with a water cooled transfer system in the inner housing.

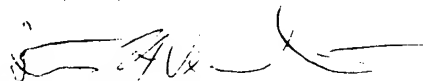
*Conclusion*

In the event that papers are missing from this communication, please contact the Customer Service Center for Technology Center 1700 at (703) 306-5665

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H VerSteeg whose telephone number is (703) 305-4473. The examiner can normally be reached on Mon - Thurs (7:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X Nguyen can be reached on (703) 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Steven H VerSteeg  
Primary Examiner  
Art Unit 1753

shv  
March 17, 2003